Government of Madras.

PUBLIC WORKS DEPARTMENT

IRRIGATION.

Recd. } 1916.

Regd.

Enclosures

Spare copies

G.O. No. 142 I., 24th March 1916

N. P.

Periyar Irrigation System

Passing orders regarding the supply of water to the single crop area under the —.

Government of Madras.

PUBLIC WORKS DEPARTMENT

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Periyar Irrigation System

Passing orders regarding the supply of water to the single crop area under the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

I

Telegram—from the Superintending Engineer, VI Circle.
To—the Chief Engineer for Irrigation.
Dated—Kodaikanal, the 1st July 1915.

Executive Engineer, Madura, requests approval start supply single crop area, X, XI, XII branch channels. Lake surplussing. Recommend sanction.

II

Memorandum No. 313 O./15-1, dated 3rd July 1915.

With reference to telegram dated 1st instant from the Superintending Engineer, VI Circle, recommending the proposal of the Executive Engineer, Madura division, to start supply of water to single crop area under the X, XI and XII Branch channels of the Periyār system, the Chief Engineer for Irrigation has the honour to state that the particulars furnished are insufficient to enable him to deal fully with the matter and that no information has been furnished showing how previous cases of a similar nature have been dealt with or what reason there is to believe that either the Government or the ryots under the channels will benefit by the proposal.

2. It is not clear from the telegram whether it is proposed to supply water to X, XI and XII branch channels with a view to induce ryots to at once plant up their single crop (kalam crop) or to induce them for this year only to cultivate two crops and at once put in a kodai crop. It is believed that the first alternative is intended. Either alternative commits Government to continuing the supply throughout the period of cultivation, i.e., to a materially larger draw off during the kodai crop season after the lake ceases to surplus, than would otherwise be necessary.

3. It is considered that while there may be a fair probability of supplies being successfully maintained, there is a definite risk in committing Government to such a system of regulation. In the years 1899 and 1904 the Periyār surplussed in July and would have done so under existing conditions, but this early abundant supply was not maintained and was followed by a period of scarcity showing that the early good supply does not give any assurance of this being maintained. If, as is believed, what is in view is merely the early planting up of the single crop, it is not clear what compensatory advantage would accrue from the early supply of water for this crop. If the monsoon continues to give favourable supplies, the single crop will be well supplied in any case and it is not clear that any advantage will be gained. If on the other hand the monsoon is unfavourable from August onwards, the steps taken will involve an undue draw off in August, September and October and a corresponding risk of deficiency.

4. The Superintending Engineer's telegram did not give the extra acreage to which it was proposed to pass water under the X, XI and XII branch channels and this information is not available in this office. The opinion of the Collector of the district on the proposed unseasonable opening of the channels referred to above for early kalam crop cultivation has not been communicated by the Superintending Engineer and probably in view of the urgency of the case has not been obtained.

5. In view of the above considerations the Chief Engineer for Irrigation has not approved of the proposals made, but has despatched the marginally-noted telegram to the Superintending Engineer on the 2nd instant. The tanks for supply should be selected by the local officers. If tanks in the Periyār system are filled through channels, such as the X, XI and XII branch channels which are generally kept closed at this season, the ryots must be warned that such supplies will not be maintained and that the channels will be closed as soon as the Periyār lake ceases to surplus and only opened again on the customary date. The above order provides for impounding in tanks in Madura or Rāmnād district as much of the surplus water which would otherwise run into the sea as can be passed through the tunnel from the Periyār lake, and for ceasing to pass any supply beyond that provided in the rules for regulation as soon as the lake ceases to surplus, and applies for this year only.

"So long as Periyār lake is surplussing water should be passed down to fill tanks in any part of Periyār system or to other suitable tanks, but abnormal supplies should not be passed from lake when it ceases to surplus.

"Ryots should be warned that supplies other than customary will not be maintained and not encouraged to plant out their single crop abnormally early."

6. It is desirable now to settle for future guidance what system of regulation should be adopted under similar circumstances and to know what has been done in the past. The Superintending Engineer is requested to submit a full report on this matter and to propose rules for the guidance of the Executive Engineer in the matter of regulation of the issues of water from the Periyār when the lake is surplussing and under similar conditions to those now under consideration. The Collector should also be consulted in the matter and his views obtained and forwarded.

W. M. ELLIS, Col., R.E.,
Chief Engineer for Irrigation.

To the Superintending Engineer, VI Circle.

III

Memorandum No. 5523/15/A.-2, dated 10th September 1915.

With reference to his letter No. 1452 * C.E., dated 28th August 1915, the Superintending Engineer, VI Circle, is informed that in paragraph 6 of this office Memorandum No. 313-O./15-1, dated 3rd July 1915, he was asked to report what system of regulation of water-supply from the Periyār lake has been adopted in the past and what should be done in the future under conditions similar to those then reported by the Superintending Engineer, viz., in the matter of the issues of water when the lake is surplussing. He was also asked to suggest rules for future guidance. The Superintending Engineer is requested, as desired in the memorandum quoted above, to submit a full report on the subject, after ascertaining the views of the Collector.

(By Order.)

F. E. MORGAN,
Assistant Chief Engineer for Irrigation.

To the Superintending Engineer, VI Circle.

IV

Letter—from J. S. WESTERDALE, Esq., Executive Engineer, Madura division.
To—the Superintending Engineer, VI Circle.
Dated—the 15th January 1916.
No.—57 S.E.

With reference to your No. 6028, dated 14th July 1915, I have the honour to forward a copy of the notes which I sent to the Collector of Madura and his reply thereto. It will be seen that, on the whole, he favours the proposal and recommends that a trial be given. I do not consider that there is any serious danger that the ryots will raise short crops. In the first place, they will have no warning that they are going to get water earlier than usual and consequently will not have bought seeds for any of the short crop varieties. In the second place, the difference in dates of allowing water to the single crop area will only be about a month and I do not think

* Not printed.

that the ryots will regard that sufficient to warrant their raising two crops instead of one and further they will have no guarantee that the supply having been started earlier will necessarily be continued so long as in previous years.

In the third place, it must be remembered that even in the double crop area many pattadars prefer to raise only one long crop and it is very probable that many in the single crop would in any case prefer only one long crop and further the ryots who have been in the habit of raising a long crop would not, I think, suddenly change to a short crop in such uncertain conditions. As proposed by the Collector, Mr. Gillman's opinion may be obtained with advantage.

The Chief Engineer's memorandum No. 313 O./15-1, dated 3rd July 1915, has been replied to in a general way in the notes referred to above, but I will also reply briefly to each paragraph—

(1) The notes now give particulars of the proposals. There is no definite record of what has been done on previous occasions. The benefit which will arise from the proposal is that one month's supply or about 15 per cent of its total supply will be given to the single crop area without any loss of head in the lake. In other words, there will be one month's more supply in the lake at the end of the season than there would be if the circumstances were not taken advantage of. Or it may result in a large increase in kodai cultivation in the single crop area. By kodai I here mean a *second* short crop and not the "kodai crop" of the double crop area, which means the first crop.

(2) The proposal is to let water to X, XI and XII branch channels to enable the ryots to raise their single crop at once. I feel sure they will do so as it has been my experience here that the single crop ryots utilise the water immediately it is let down to them. I have shown in my notes that this is not likely to cause any larger draw off from the lake.

(3) The notes cover most of this paragraph. This proposal will only be given effect to if the lake is full, and in that case, even if sufficient water were drawn off to supply the single crop area, the level in the lake on the 20th August would be above the *average* level on that date, even if the monsoon did suddenly stop. As the single crop area is always opened about the 20th August, the conditions would be as usual after that date and any continued failure of the south-west monsoon would only have the same effect as such a failure would have in any ordinary year in which the single crop area had not been opened until August 20th, and there could only be the same risk of deficiency.

(4) The ayacut under the X, XI and XII branch channels and all the reach sluices below IX branch channel amounts to 55,323 acres.

In conclusion, the proposal now under consideration may be summarised. It is proposed that the Executive Engineer may commence the continuous supply of water to the single crop area at any date after the 1st July as soon as the lake begins to surplus.

I have to request that early orders may be passed as it appears very likely that these conditions will occur again this year if the south-west monsoon is anywhere near average.

No. 150 C.E., dated 24th January 1916.

Copy with the notes of the Executive Engineer and the Collector's reply thereto forwarded to the Chief Engineer for Irrigation for favour of very early orders being issued on the Executive Engineer's suggestions.

L. D. VENKATARAMA AYYAR,
Superintending Engineer, VI Circle.

ENCLOSURES.

(1)

Note on subject of opening the Periyar lake earlier in case of full supply in July.

With reference to Superintending Engineer's No. 6028, dated 14th July 1915, forwarding copy of Chief Engineer's memorandum No. 313-O. of 15, dated 3rd July 1915, I have the

honour to state that I have postponed replying to the reference until the water was let down permanently to the single crop area and the result of allowing water earlier than usual to fill tanks could be judged.

2. There are no records in this office of the actual use to which water was put in any previous case but it is apparent from the registers that water has been sent below the IX branch channel earlier than usual in one or two years. These occasions are referred to again below.

3. The fact that the lake surplussed in 1899 and 1904 cannot be taken into account in comparing the various years as it surplussed at a lower level in those days and there is no evidence to show that it would ever have filled to the present surplus level of 152. This year the lake surplussed in June for the first time on record and it was this unusual state of affairs that led me to look up the records and see if a sound argument could be formed for utilising the surplus at once instead of allowing it to run to waste for the remainder of the monsoon. I concluded that it would be possible to send a continuous supply to the single crop area from any day after June 29th on which the lake surplussed.

4. Except in 1899 and 1904, the lake was at a higher level on August 18th than on June 29th in every year. August 18th is chosen for comparison as it is about an average date for increasing the issues from the lake for the single crop area. In 1899 the monsoon appears to have been poor and this can be regarded as a bad year in any case and can be excluded from comparison. In 1904 the difference in lake level on the two dates was small. Between the two dates the lake rises and falls according to the monsoon intensity but on the whole it rises. I concluded therefore that if the lake was *full* on June 29th, or for that matter on *any day* in July, it would most probably be full or *surplussing* from that date until August 18th at least. It might fairly reasonably be expected therefore if full supply, or sufficient supply to send water to the whole Periyār Tract (which might not be full supply), were drawn from the lake continuously from any date that it surplussed in July that the additional water drawn off during any days that the lake would not ordinarily have surplussed would be compensated for by the water otherwise lost during the days that it did surplus. It would therefore be possible to obtain 4 to 6 weeks' supply for the single crop area without any, or if any, a disproportionately small, extra draw off from the lake. If the subsequent north-east monsoon was a failure we should be on the advantageous position of having so to speak, stolen, say a month's supply from the south-west monsoon to compensate for the shortage in the north-east monsoon. There would be sufficient time to warn the ryots in the single crop area not to attempt to raise double crops and the supply to the single crop area could begin to be reduced from the end of December instead of from the end of January as at present thus reducing the draw off from the lake when it would be getting low. If the north-east monsoon was a success, there could be no need to be sparing in supply and if any ryots in the single crop area cared to raise two crops, sufficient supply could be maintained for them so long as the supply to the double crop area was continued. The advantage in this case would be richer crops and increased revenue. It may now be seen how far this argument has been supported by facts in this year and in previous years when the lake has surplussed in July. There is a standing order that whenever the lake fills to 152·00 it shall be kept at that level in the first place by increasing the discharge through the head sluice and that the regulator shall only be used when the level rises above 152·00. Whenever the head sluice is fully open before supply has been increased for the single crop area, therefore, the lake must be regarded as surplussing.

5. *Season* 1915.—The lake commenced to surplus on June 26th and did so until July 6th. It commenced again on July 20th and continued to surplus until August 16th. Except therefore for 14 days in July, full discharge was being sent down to Madura. If full discharge 2·60 on the weir or 1,257 cusecs had been maintained during those 14 days also instead of 2·1 on the weir (753 cusecs the nearest gauge reading to the 750 cusecs ordered by Government for this year's experiment on Mr. Gillman's recommendations), then the total *additional* draw off from the lake would have been 601,000,000 cubic feet of water and the lake-level would have been reduced. But subsequent to July 20th, the lake surplussed *through the regulator* on and off until August 10th and in this period the total loss through the regulator was 4,860,000,000 cubic feet. This would have compensated nearly eight times over for the extra draw off and the lake reading would have been the same on August 16th as if the continuous supply had not been sent down.

6. *Season* 1912.—In this year the lake began to surplus on July 29th and full supply was allowed through the head sluice on 12 days out of the 26 between that date and August 25th, the date in that year when supply to single crop area began continuously. If full supply had been drawn off for the remaining 14 days, the total extra discharge would have been about 490,000,000 cubic feet. But between August 25th and 31st the lake surplussed about 950,000,000 cubic feet through the regulator and would have again compensated for extra draw off. In this year water was allowed in X branch channel on 14th August and to XI and XII branch channels on 20th August but regular supply commenced on August 25th.

7. *Season* 1911.—The lake began to surplus on July 13th and head sluice was fully opened from July 14th to 21st and again from August 9th till past the date of opening the single crop area. As the lake continued to surplus from July 14th to August 1st, the

head sluice could have been open fully all that time. It was probably reduced because the Executive Engineer had more water than he knew how to dispose of in Madura as was the case in July this year. In this year therefore would only have been the eight days from August 1st to 9th during which full supply would need to have been drawn off during the period the lake was not surplussing. In this year the lake did not surplus subsequent to July 31st and so an actual loss in head would have occurred. During the period the lake was discharging at 2·25 on the weir, the fall in level was about 0·13 per day and during the subsequent period when it was discharging at 2·60 on weir (full supply) the daily fall was 0·25. If full supply had been allowed during the eight days, the extra fall in the lake level would have been 0·96 foot. The lake level in August 8th would then have been 150·49 instead of 151·45. I think any Executive Engineer in charge of this division would be fully satisfied with a lake level of 150·49 in August 8th. It must be remembered also that it would not be necessary in actual practice to draw off *full* supply during the periods when the lake was not surplussing as *full* supply is not a necessity in the branch channels during the first two weeks or so after opening them. In this year supply was allowed continuously to X branch channel from July 28th and to XI and XII branch channels from August 8th. This year also the Executive Engineer appears to have had too much water and reduced the supply on 21st even though lake was full.

8. *Season* 1909.—The figures for this year can only be approximate as the old measuring weir was in existence, and accurate discharges from the readings are not available. At that time also the head sluice was not *fully* opened when the lake surplussed but some attempt was made at regulation with it. For this purpose therefore the gate was raised sometimes 6′ 6″ and sometimes 9′ 0″. The gauge readings for these two openings however were 2·75 and 2·80 respectively and when subsequently opened 12′ 0″ it was also 2·80 on weir. Evidently the discharge above an opening of about 6′ 6″ is restricted by the resistance of the tunnel, and it can be safely assumed that for openings of 6′ 6″ and even though not quite at full discharge the issues would be sufficient for the whole Periyār tract.

9. In 1909, then, full discharge (or near it) was sent down into Madura from 11th July to August 19th except for 8 days. From 19th August until the end of the month the lake also surplussed through the regulator to the total extent of 1,030,000,000 cubic feet. If full supply had been drawn off during the 8 days when it was reduced, the total extra discharge would have been 950,000,000 which would have been over compensated for by the actual loss through the regulator.

10. In 1909, supply was let down to XI branch channel from August 7th but regular supply to XI and XII was not commenced till August 20th.

11. It will be seen therefore that the records of previous years support the argument fully, except for 1911, when the reduction in head would have been of small account and would have been fully compensated for by the extra 25 days supply to single crop area which would have been given.

12. *The advantages of sending down early supply.*—The only certain advantage is the utilisation of a great quantity of water efficiently which would otherwise have been wasted or partly used inefficiently. The essence of the argument is that water may be supplied to the single crop area 42,795 acres for a certain period without any reduction of level in the lake. These are the possible additional advantages referred to.

13. This year the surplus water not required was sent down to tanks and uranis in the single crop area and a list of tanks supplied is appended to these notes.

14. All direct irrigation sluices in channels were closed but the leakage water was utilised throughout the single crop area for raising seedlings with the result that ploughing and transplantation commenced immediately the water was let down in the usual way for continuous supply. The result of this will not be evident until the cultivation accounts are prepared for 1915-16. It may result in a large extent of double crop cultivation in the single crop area or it may only mean that supply can be reduced earlier. On another occasion I should not be inclined to send down supply to tail end tanks earlier as was done this year except in one or two cases in which such tanks are the supply tanks for distributaries or offtakes.

15. Many of the tanks in Melūr do not ordinarily get supply for a month or more after the supply is commenced in the main channels. If such tanks were given supply say in July or early August *before* the general supply to the direct irrigation was commenced, there would be a slight risk that when the direct irrigation was commenced and the supply which was being sent direct to tanks was stopped, the water in the tanks might not be sufficient to carry on with until they begin to get their ordinary supply through drainage and from tank to tank surplus. I consider therefore that it would be the best policy to allow water to both direct and indirect irrigated areas in the usual way as soon as water is allowed to the single crop area. The tanks which at present get supply late would get it proportionately earlier and would have nothing to complain about.

16. If any orders are passed on this subject, it would be advisable to stipulate that if the circumstances under reference occurred it should be the first duty of the Executive Engineer to

use the surplus water for clearing the silt out of the head of the main canal by means of the scouring sluice and that after this had been done effectively for a few days, water could be sent down to the single crop area continuously and that the Executive Engineer could continue to draw off the supply required for this purpose even when the lake ceased to surplus.

J. S. WESTERDALE,
Executive Engineer, Madura Division.

(2)

Letter—from G. F. PADDISON, Esq., M.A., I.C.S., Collector of Madura.
To—the Executive Engineer, Madura division.
Dated– the 3rd January 1916.
No.—D. Dis. 4452/Rev. of 1915.

With reference to your letter No. 2514 M., dated 6th November 1915, I have the honour to state that I think that the system suggested in your letter might be given a trial now. It is clear that there will be a great saving of water which would otherwise be wasted, but the danger is that the ryots lower down will probably start short crop instead of the long crop. If they do, they will be disappointed if they cannot grow a second crop. It will therefore be necessary to make it clear that a second crop is not assured.

2. I would further suggest that before Government come to a final decision on the point, the Hon'ble Mr. Gillman might be consulted.

Order—No. 142 I., dated 24th March 1916.

The Superintending Engineer, VI Circle, recommended in July last a proposal of the Executive Engineer, Madura division, that the supply of water to the single crop area under the X, XI and XII branch channels of the Periyār system be commenced at any date after the 1st of July as soon as the lake begins to surplus. It was pointed out that if the proposal was adopted, there would be a great saving of water which would otherwise be wasted.

2. It is observed that the ryots in the single crop area at present raise a long "kalam crop", and it is believed that generally this is the only crop grown. If the kalam season were to commence early in July as proposed, there is the danger that the ryots might take to raising two crops regularly, and there would then be great difficulty in supplying this area at the end of the season. The following arrangement is considered the best under the circumstances :—

During the period — June to August — water will be restricted to the double crop area, the extra supplies derived from the opening of the head sluice fully, when the lake surpluses, being utilized in filling all Government tanks first and subsequently zamindari tanks. Thus, when the kalam season begins, the double crop area can be kept going with a comparatively small supply, and there will be no difficulty in meeting fully the demands of the single crop area.

(True Extract.)

W. M. ELLIS, Col., R.E.,
Secretary to Government, P.W.D.
(Irrigation Branch).

To the Superintending Engineer, VI Circle.
„ Board of Revenue (Revenue Settlement).
„ Revenue Department.

Forwarded to the

(By Order.)

Deputy Registrar.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

NOTES CONNECTED WITH G.O. No. 142 I., DATED 24TH MARCH 1916.

[SUBJECT.—*Supply of water from the Periyār lake when it is surplussing.*]

Previous papers :

Dis. 926, *1st May* 1913.
G.O. 273 *I.*, *4th June* 1915.
G.O. 1524, *Revenue*, *30th June* 1915.
„ 1943 „ *25th August* „

Statements of daily discharges of the Periyār from July 1896 *to March* 1911 *(prepared and printed by the Chief Engineer for Irrigation's office.)*

Telegram from the Superintending Engineer, VI Circle, dated 1st July 1915.

Submitted for orders.

G.V.—2-7-15.

The record of water-supplies to the Periyār lake shows that in two years 1899 and 1904 in which the lake surplussed in July there was a great fall of lake level in September-October and it is not considered desirable to guarantee an issue to the single crop area from so early a date. It is, in my mind, doubtful if the ryots would commence a single crop at this time as there would be risk of getting rain when the crop was ready for harvest. It is however considered that so long as the lake is surplussing, water should be passed down to fill tanks in the Periyār system or, if these are full, should be passed down the river to supply zamindari tanks and that it should not be allowed to surplus to waste to any avoidable extent.

A telegraphic reply as below to be sent to the Superintending Engineer and also direct to the Executive Engineer :—

"So long as Periyār lake is surplussing water should be passed down to fill tanks in any part of Periyār system or to other suitable tanks, but abnormal supplies should not be passed from lake when it ceases to surplus.

Ryots should be warned that supplies other than customary will not be maintained and not encouraged to plant out their single crop abnormally early."

This wire may issue urgent, and case should then be returned.

W. M. ELLIS—2-7-15.

Telegram issued. File re-submitted.

G.V.—2-7-15.

The Superintending Engineer to be addressed with reference to his wire saying that information given is insufficient for fully dealing with the matter and pointing out that no information is available showing how previous cases of a similar nature have been dealt with or what reason there is to believe that either Government or the ryots under channels will benefit by the proposal. It is not clear from the wire whether it is proposed to supply water to channels X, XI and XII with a view to induce ryots to at once plant out their single crop (kalam crop) or to induce them for this year only to cultivate two crops and at once put in a kodai crop. It is however believed that the first alternative is intended. Either alternative commits Government to continuing the supply throughout the period of cultivation, that is, to a materially larger draw off after the lake ceases to surplus than is customary or than would otherwise be necessary.

It is considered that while there is certainly a fair probability that supplies could be successfully maintained, there is a definite risk in committing Government to such a system of regulation.

In the years 1899 and 1904 the Periyār surplussed in July and would have done so under existing conditions, but this early abundant supply was not maintained and was followed by a period of scarcity showing that the early good supply does not give any assurance of this being maintained. If, as is believed, what is in view is merely early planting out of the single crop, it is not clear what compensatory advantage would accrue from the early supply of water for this crop.

If the monsoon continues to give favourable supplies, the single crop will be well supplied in any case and it is not clear that any advantage will be gained.

If on the other hand the monsoon is unfavourable from August on, the steps taken will involve an undue draw off in August, September and October and a corresponding risk of deficiency.

The wire of Superintending Engineer did not give the extra acreage to which it was proposed to pass water under channels X, XI and XII and this information is not available in this office. The opinion of the District Collector on the proposed unseasonable opening of the above channels for early kalam crop cultivation has not been communicated by the Superintending Engineer and probably, in view of the urgency, not been obtained.

In view of the above considerations, the Chief Engineer for Irrigation has not approved of the proposals made but has ordered by wire, dated 2nd July, that all surplus water which can be passed through the tunnel should be so passed and used for filling tanks either in the Periyār system or elsewhere. The tanks for supply must be selected by local officers. If tanks in the Periyār system are filled through channels (such as Nos. X, XI and XII) generally kept closed at this season, the ryots must be warned that such supplies will not be maintained and that the channels will be closed as soon as the Periyār lake ceases to surplus and only opened again on the customary date. The above order provides for impounding in tanks in Madura or Rāmnād district as much of the surplus water, which would otherwise run into the sea, as can be passed through the tunnel from Periyār lake and for ceasing to pass any supply beyond that provided in the regulation rules as soon as the lake ceases to surplus, and applies to this year only.

It is however desirable now to settle, for future guidance, what system of regulation should be adopted under similar circumstances and to know what has been done in the past.

The Superintending Engineer is to be requested to submit a full report on this matter and to propose rules for the guidance of the Executive Engineer in the matter of regulation of the issues of water from Periyār when the lake is surplussing and under similar conditions to those now under consideration. The Collector should be consulted on the matter and his views communicated.

W. M. ELLIS—3-7-15.

A draft memorandum to the Superintending Engineer is accordingly put up for approval.

G.V.—3-7-15.

W.M.E.—3-7-15.

[Issued as Memorandum No. 313-O./15-1, dated 3rd July 1915.]

The Superintending Engineer may, it is submitted, be reminded for a reply to Memorandum No. 313 O./15-1, dated 3rd July 1915, on the 20th instant.

G.V.—5-8-15.

Yes.

F. E. MORGAN—5-8-15.

A draft reminder to the Superintending Engineer, VI Circle, is submitted for approval and issue.

V.G.—21-8-15.

Issue.

P. K. SUBBA AYYAR—23-8-15.

From the Superintending Engineer, VI Circle, dated 28th August 1915, *No.* 1452 *C.E.*

Submitted.

2. It is for orders if the papers may be recorded.

V.G.—3-9-15.

Please see paragraph 6 of the Chief Engineer for Irrigation's Memorandum No. 313 O./15-1, dated 3rd July 1915. The Superintending Engineer was asked to report what system of regulation of water-supply from the Periyār lake has been adopted in the past and what should be done in the future under conditions similar to those then reported by the Superintending Engineer, viz., in the matter of the issues of water when the lake is surplussing. He was also asked to suggest rules for future guidance. The question raised by the Chief Engineer for Irrigation is a comprehensive one and it is desirable that it should be properly inquired into, the views of the Collector obtained and definite orders passed in the matter. The Superintending Engineer's disposal of the question is, to say the least of it, quite inadequate. He may now be asked to report on the matter as required by the Chief Engineer for Irrigation.

P.K.S.—4-9-15.

F. E. MORGAN—7-9-15.

W. M. ELLIS—7-9-15.

A draft memorandum to the Superintending Engineer is accordingly submitted for approval.

G.V.—8-9-15.

F.E.M.—8-9-15.

[Issued as Memorandum No. 5523/15 A-2, dated 10th September 1915.]

From the Superintending Engineer, VI Circle, dated 22nd December 1915, *No.* 2064 *C.E.*

Submitted.

2. The Executive Engineer, Madura division, reports that the Collector has not replied to three of his reminders on the subject. The file may lie over for one month. If no information is received from the Collector by that time, the Board of Revenue may be addressed with a view to move the Collector to expedite the disposal of the reference made to him by the Executive Engineer.

V.G.—23-12-15.

P.K.S.—24-12-15.

F.E.M.—4-1-16.

From the Superintending Engineer, VI Circle, dated 24th January 1916, *No.* 150 *C.E.*

Please see the Chief Engineer for Irrigation's note on pages 1–2 ante. The Superintending Engineer, VI Circle, forwards copy of a report from the Executive Engineer, Madura division, on the several points raised in Memorandum No. 313–O./15–1, dated 3rd July 1915. The Executive Engineer has also consulted the Collector on the subject, who suggests that the proposal to supply water to the single crop area at any date after 1st July as soon as the lake begins to surplus might be given a

trial. The Collector fears that there is the danger of the ryots lower down starting short crop instead of long crop and that it would be better to make it clear that a second crop is not assured as the ryots will be disappointed if they cannot grow a second crop. He however suggests that the Hon'ble Mr. Gillman might be consulted before a decision is come to. Submitted that with the concurrence of Revenue the file may be sent u.o. to the Hon'ble Mr. Gillman.

3. It is also for orders if the Superintending Engineer may be reminded now to submit a report on the working of the rules of regulation of water from the lake sanctioned as an experimental measure for the last season in G.O. No. 273 I., dated 4th June 1915.

G.V.—28-1-16.

P.K.S.—31-1-16.

It is possible that, if the Executive Engineer's proposal were adopted, 1,500 millions cubic feet more would have to be issued in July, than under the present rules, but in practice it is probable that the amount would not exceed 1,000 millions cubic feet. The Executive Engineer examines the years 1915, 1912, 1911 and 1909 and in those years if full supply for the long crop had been issued as soon as the lake surplussed, the subsequent lake levels would have been hardly, if at all, affected.

2. The Executive Engineer is wrong in stating that there is no evidence to show that the lake would have filled to R.L. 152·00, the present F.T.L. in the years 1899 and 1904.

In 1899, the lake surplussed at R.L. 144·00 from June 30th to July 21st to the extent of 6,306 millions cubic feet. The capacity between 144·00 and 152·00 is about 2,300 millions cubic feet, therefore the lake at present F.T.L. (152·00) would have surplussed on the 4th July and have continued to do so until the 21st. If full supply had been issued from the 4th until August 20th, instead of the 89·93 millions cubic feet that was actually issued, then the extra draw off would have been 580 millions cubic feet, but as we know the issues were underestimated prior to about 1908 or 1909, it would probably not have exceeded say, 450 millions cubic feet. The level on October 14th was 124·20, about 2,500 millions cubic feet effective capacity, and after that date the lake began to rise. As things turned out, the 450 millions cubic feet would not have mattered. In 1904, the lake surplussed at R.L. 144·00 on June 20th and would have reached R.L. 152·00 on the 26th, so that the surplussing of the lake in 1915 in June is not a record. If full supply had started on July 1st, the lake level would not have been affected as surplussing took place from July 1st to 27th and August 3rd to 19th.

See Tank Restoration Register for three years ending 1901-02 and green book put up below.

The records, except the year 1899, support the Executive Engineer's proposal, but in 1899 we might have had a worse north-east monsoon.

3. I cannot see that the ryots can make use of the full supply for some time after it is started, when it is given them 1 to $1\frac{1}{2}$ months earlier than usual, and once having got it earlier they will always be agitating for it, whatever the level of the lake.

F. E. MORGAN—31-1-16.

The matter under reference is how best to utilize the water in the Periyār lake when the lake is full before the date for passing down full supply for the kalam crop.

The lake surplussed this year at the end of June and a reference was made for permission to all at once commence issue of full supply for kalam crop to channels X and XI.

2. Further information and the Collector's opinion were called for and the Superintending Engineer was instructed meanwhile that as long as the lake was on the point of surplussing all the water possible should be passed down through the tunnel for filling tanks, and apparently this was done. It appears to me that unless and until all the tanks which are commanded have been filled, no waste of water occurs by postponing commencing kalam crop issue of water to the date fixed for the same.

3. The Executive Engineer does not report in much detail on this aspect of the question but it is clear that he is not in favour of it and wishes to introduce the system of giving water to the single crop area and continuing such supply from the first date after 1st July on which the lake is quite full. He proposes that such water should be only used for kalam crop. There appears to be a danger that some ryots will take advantage of such a measure to put in kodai crop with a view to raising two crops.

4. It is not clear whether the Executive Engineer is in favour of raising two crops but he appears to be so on any year when the north-east monsoon is good, but he lays it down that the kalam crop must first be raised and the ryots warned that they have no claim to water for a second crop.

5. The Collector appears to view the proposal favourably but without taking any decided view and suggests a reference to the Hon'ble Mr. Gillman.

6. I regard the proposals, with some misgiving, as unsettling to the ryots who will never know when to expect kalam crop water. It does not appear that there is appreciable risk in the change, but I am not convinced that filling tanks, even if *not* Government tanks, is not the way to make the best use of the water.

Surplussing into the sea is obviously the way not to do it.

If all other tanks are filled, I would pass water through the Peranai regulator to zamindari tanks below.

7. With the concurrence of Revenue, it is proposed to send the file to the Hon'ble Mr. Gillman for favour of his views.

8. I may add that if water for seedlings is not, as I gather from paragraphs 14 and 15 of the Executive Enginer's note, issued to the single crop area before full kalam crop supply is passed down, this appears to be an error which calls for revision. Only a small supply is required for such a purpose.

W. M. ELLIS—20-2-16.

To the Revenue Department u.o.

REVENUE DEPARTMENT.

Please see paragraph 7 of Public Works department (Irrigation) Secretary's note above. The proposal to send the file to the Hon'ble Mr. Gillman may, it is submitted, be accepted in this department. Public Works Department (Irrigation) will, no doubt, send the file again to this department for remarks on its return from Mr. Gillman.

Yes.
J.P.B.—16-2-16.

K.A.M.—14-2-16.
W.A.K.—14-2-16.

A. H. A. TODD—15-2-16.
J. P. BEDFORD—16-2-16.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

The file may now be sent to the Hon'ble Mr. Gillman u.o. for favour of his views on the subject.

T.S.R.—18-2-16.
P.K.S.—18-2-16.

F. E. MORGAN.—18-2-16.
W.M.E.—19-2-16.

I am opposed to Mr. Westerdale's suggestion for the following reasons.

At present, the ryots in the single crop area first raise a long "kalam" crop and subsequently snatch a second crop after February in some places with the aid of tank water. I believe that generally the "kalam" is the only crop grown, but, as my enquiries in 1914 did not extend to the single crop area, I cannot speak with certainty. If the kalam season is to commence early in July, as now proposed, their is a danger that the ryots may take to raising two crops regularly, and no rules or warnings that may be issued will prevent them from doing so, if they see even a speculative chance of harvesting both crops. There would be great difficulty in supplying this area at the fag-end of the season, and the practice of raising two crops in it should not be encouraged.

The main complaint, at present, in the single crop area, seems to be that many of the Melūr taluk tanks do not get their supply for a month or more after water is let down below the IX branch channel, with the result that transplantation in these areas is delayed until November—far too late. The most seasonable time for transplantation is about the beginning of October, so that the plants will be well established before the monsoon, and that the crop may be harvested without fear of damage from rain.

I am very doubtful, therefore, if the Melūr ryots desire 'kalam' seed beds in early July, as the weather would not be seasonable in the final stages of the crop. The ryots can have no reasonable cause for complaint if an adequate supply can be distributed over the *whole* of the single crop area when water is let down to that area in August. I am inclined to think that the following arrangement would be best. During the period—June to August—that water is restricted to the double crop area, the extra supplies derived from opening the head sluice fully, when the lake is surplussing, may be utilised in filling all tanks commanded by branch channels I to IX, including, if possible, tanks outside the double crop area, such as Thenur, Todaneri, Paravai, the tanks round Madura town and Kunnathur. If this is done, then, when the kalam season begins the double crop area can be kept going with a comparatively small supply, and it ought to be possible to meet the needs of the single crop area fully. Any surplus left after meeting all requirements of the double crop area before middle of August may be let down the river to fill zamindari tanks, which are having a very thin time in the matter of supply.

I think that such an arrangement, under which the needs of the two areas will be attended to in succession, is more likely to be successful than Mr. Westerdale's scheme to supply both at the same time.

H. F. W. GILLMAN—21-2-16.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

To the Revenue Department u.o. for remarks.

W. M. ELLIS—21-2-16.

REVENUE DEPARTMENT.

The question for consideration in this file is how the water in the Periyār lake when the lake is full before the date fixed for the passing down of full supply to the kalam crop (long crop), that is 18th August, is to be utilized. The Executive Engineer considers that the continuous supply of water to the single crop area should be commenced at any date after the 1st July as soon as the lake begins to surplus. The Collector whom the Executive Engineer has consulted considers that the proposal might be given a trial as there will then be a great saving of water which would otherwise be wasted, but he apprehends that the early supply of water to the single crop lands may make the ryots start the cultivation of a short crop instead of the

long crop in the hope of being able to raise a second crop with the result that they would be disappointed if they subsequently find it impossible to grow a second crop. This apprehension is shared by the Public Works Department (Irrigation) Secretary also. The Honourable Mr. Gillman who has been consulted in the matter also considers that if water is supplied early in July the single crop ryots may take to raising two crops regularly. He is of opinion that such a practice should not be encouraged. The Public Works Department (Irrigation) Secretary and Mr. Gillman are agreed that the better plan would be to utilize the extra supply of water in filling the tanks commanded by the system—the Government tanks first and then the zamindari tanks.

2. It is submitted that this department may agree with the Public Works Department (Irrigation) and Mr. Gillman that the supply of water to the single crop area should not be commenced early and that the extra supply of water should be utilized in filling the tanks commanded by the system. The file may be returned to Public Works Department (Irrigation) with the remarks of this department.

K.A.M.—28-2-16.
W.A.K.—29-2-16.

We may, I think, agree with this. Mr. Gillman has of course special knowledge of the system.

A. H. A. TODD—1-3-16.
J. P. BEDFORD—1-3-16.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

Submitted. Mr. Gillman's views may be accepted.

P.K.S.—4-3-16.

W. M. ELLIS—4-3-16.

A draft order is submitted for approval. It may be sent to Revenue for acceptance before circulation to the Honourable Member. It is for consideration whether a paragraph should be added to the draft in regard to the supply for raising seedlings, with reference to paragraph 8 of the Secretary's note, dated 20th February 1916.

B.G.R.—7/8-3-16.
P.K.S.—9-3-16.

F. E. MORGAN.—10-3-16.
W.M.E.—10-3-16.

To the Revenue Department u.o.

REVENUE DEPARTMENT.

Submitted that the draft may be accepted in this department and the file returned to Public Works Department (Irrigation).

K.A.M.—14-3-16.
W.A.K.—15-3-16.

A.H.A.T.—15-3-16.

Accepted in Revenue.

J.P.B.—16-3-16.

To the Public Works Department (Irrigation) u.o.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

The draft order may now be circulated to the Honourable Member.

B.G.R.—17-3-16.

F. E. MORGAN—17-3-16.
W. M. ELLIS—17-3-16.

Approved. The case should be circulated to the Hon'ble Mr. Cardew.

H. A. S[TUART]—19-3-16.

Circulated to the Hon'ble Mr. Cardew.

F.E.M.—20-3-16.
A. G. C[ARDEW]—22-3-16.

Issue.

F.E.M.—25-3-16.

[G.O. No. 142 I., dated 24th March 1916.]

G.F. 88.

SUPERINTENDING ENGINEER'S OFFICE
GENL 1863
25 AUG 1915
ENCLD.
P.W.D.
VI CIRCLE, TRICHINOPOLY.

PUBLIC WORKS DEPT. IRRIGATION
Madras.
5523/15 A
30 AUG 1915
No. 6537/15
GOVERNMENT OF MADRAS

Public Works Department.

Irrigation Branch.

No 1452 CE
28-8-15.

I REMINDER. No. 5523/15

REPLY.

To

The Supg. Engineer,
VI circle.

The undersigned has the honour to invite ~~is directed to invite~~ ~~invites~~

attention to the communication noted in the margin and to request that

E.D.'s No. 3136/15-1, dated 3.7.15

this reminder may be returned at once with information as to—

(1) the stage at which the matter now is, and

(2) the date by which a reply may be expected ~~and~~

(3) ~~the circumstances which have caused the delay.~~

2. It is requested that the reply to this reminder may be sent not later than 3.9.15

P. K. Subba ...
23. 8-15

Office P.W.D (I)

Station Chepauk. For Chief Engineer
Signature.

Dated 24. 8. 15. for Irgn.
Designation.

21.8.15

SUBJECT.

Proposal to start supply of water to the single crop area under certain channels of the Periyar system.

Requesting the S.E. to furnish full particulars re: the ———

To

THE Chief Engineer
for Irrigation

Beyond supplying water to some lands ~~...~~ in the single crop area, nothing else has been done & there is therefore nothing to report.

[signature]
25/8/15

Superintending Engineer
VI Circle

No. 5452 DB
28-8-15

Public Works Department
Irrigation Branch.

1 REMINDER No. 5523/15

To
The Supdg. Engineer,
VI Circle.

Chief Engineer
for Irrigation

The undersigned has the honour to invite attention to the communication noted in the margin and to request that this reminder may be returned at once with information as to—

No. 3139/15-1 dated 3.7.15

(1) the stage at which the matter now is,

(2) the date by which a reply may be expected and

~~(3) the circumstances which have caused the delay.~~

2. It is requested that the reply to this reminder may be sent not later than 3.9.15

Office P.W.D. (?)

Signature

Station Ghepauk for Chief Engineer for Irrigation

Designation

Dated 8.15

SUBJECT

Superintending Engineer
VI Circle

Very Urgent.

O.F. 8A

5523/15 A
7692/15
7 OCT 1915
GOVERNMENT OF MADRAS

Public Works Department.

No.8299/653 dated 21--9--15. Branch.

REMINDER.

To

~~The Executive Engineer,~~

Madura Division.

The undersigned ~~has the honour to invite~~ ~~is directed to invite~~ invites attention to the communication noted in the margin and to request that this reminder may be returned at once with information as to—

This office No. ~~6028~~, dated ~~14--7--15~~,

(1) the stage at which the matter now is,

(2) the date by which a reply may be expected and

(3) the circumstances which have caused the delay.

~~3~~ 2. It is requested that the reply to this reminder may be sent not later than

Sd/:- LA.Rengaswami Iyer,

For Suptg:Engineer,

Office of the S.E.VI. | VI Circle.
Station, Trichy, | Signature.
Dated Septr. 15. | Designation.

SUBJECT.

Regulation of water supply from the Periyar Lake.- Calling for a report as to what system of ---- has been adopted in the past and what should be done in the future.

REPLY.

No.1064-S.E., dated 27--9--1915.

To

The Superintending Engineer,

VI Circle.

Sir,

In order to send a complete reply I kept the reference until the water was let down to the single crop area in the usual way.

I wished to know how many tanks were supplied in the single crop area by the water let down before the single crop area was opened properly on August 20th. A report is awaited from the Sub-Divisional Officer on that point and the reference will be replied to as soon as it is received.

Sd/:- J.S.Westerdale,

Ex:Engineer, Madura Division.

No. 1674 CE / 655 d/ 5.10.15.

Copy forwarded to the Chief Engineer for Irrigation for information with reference to his Memo.No.5523/15-A/2 dated 10th September 1915.

2. The further report promised will be submitted as soon as it is received.

[signature]

Suptg:Engineer, VI Circle.

SUPERINTENDING ENGINEER VI CIRCLE TRICHY
CE 2528
22 NOV 1915

8

VE

PUBLIC WORKS DEPT., IRRIGATION, Madras
9 - DEC 1915
No. 9620/15 A
GOVERNMENT OF MADRAS

5523/15

CE
No 1966
.655 7.12-1915

G.F. 83.

Public Works Department.

Irrigation Branch.

REMINDER. No. 5523/15

REPLY.

To

The Supg. Engineer,
VI circle.

To

The Chief Engineer
for Irrigation

The undersigned ~~has the honour to invite~~ ~~is directed to invite~~ invites attention to the communication noted in the margin and to request that this reminder may be returned at once with information as to—

S.E.'s No. 1674 C.E. 655, dated 5.10.15

(1) the stage at which the matter now is, and

(2) the date by which a reply may be expected ~~and~~

(3) ~~the circumstances which have caused the delay.~~

2. It is requested that the reply to this reminder may be sent not later than 1.12.15.

P. K. Subbaraiya 19.11.15

Office P.W.D. (I)

Station Chepauk. For Chief Engineer for Irrigation

Signature.

Designation.

Dated 20.11.15.

[initials] 18.11.15.

SUBJECT.

Regulation of water supply from the Periyar lake.

forwarding a copy of E.E.'s letter stating that a report was awaited from the S.D.O.

Sir

The report is still awaited from the ~~[illegible]~~ Executive Engineer. It is understood that he has forwarded the report to the Collector for his opinion.

(2) Before the 15th December 1915

[initials] 24/11/15

[initials] 29/11

[signature]
3-12-15
Supg. Engr.
VI Circle

Public Works Department.

Irrigation Branch.

II REMINDER. No. 5523/5

To

The Supdg. Engineer,
Circle.

The undersigned has the honour to invite attention to the communication noted in the margin and to request that this reminder may be returned at once with information as to—

(1) the stage at which the matter now is.

(2) the date by which a reply may be expected.

(3) the circumstances which have caused the delay.

2. It is requested that the reply to this reminder may be sent not later than 18.12.15.

3. The previous reminder of 20.11.15 has not yet been replied to.

No. 19266/655 dated 3.10.15

Office P. W. D. (I)

Station Chepauk

Signature

Designation for Chief Engineer for Irrigation

Dated 12.12.15

SUBJECT.

Regulation of water supply from the Periyar lake.

Forwarding a copy of the ...

REPLY.

No. 2023 14.12.15

The Chief Engineer for Irrigation

[illegible]

V/3

2654
9 DEC 1915

5523/15 C.F. 88.

PUBLIC WORKS DEPT., IRRIGATION
Madras
16 DEC 1915
No. 9865/15
GOVERNMENT OF MADRAS

Public Works Department.

Irrigation Branch.

II REMINDER. No. 5523/15

REPLY. 14-12-15

To

The Supg. Engineer,
VI circle.

To

The Chief Engineer for
Irrigation Madras

The undersigned ~~is directed to invite~~ ~~invites~~ has the honour to invite attention to the communication noted in the margin and to request that this reminder may be returned at once with information as to—

S.E.'s No. 1674 C.E./655, dated 5.10.15

Sir,

(1) the stage at which the matter now is,

(2) the date by which a reply may be expected and ~~and~~

~~(3) the circumstances which have caused the delay.~~

(1) The report called for is still awaited from the Ex: Engineer

(2) By the end of this month

2. It is requested that the reply to this reminder may be sent not later than 18.12.15.

3. The previous reminder D. 20.11.15 has not yet been replied to.

3. The previous reminder was returned on the this office on 1966 CE of 7.12.15.

8/12/15

Office P.W.D. (I)
Station Chepauk
Dated 7 12.15.

P. K. Subbarayan
6.12.15
Signature.
For Chief Engineer
Designation.
for Irrigh.

6.12.15.

[signature]
12-12-15
Supg Engineer
VI Circle

SUBJECT.

Regulation of water supply from the Periyar lake.

Forwarding a copy of the E.E.'s letter stating that the reference was pending with the S.D.O.

Public Works Department.

Irrigation Branch.

II REMINDER No. 5523/13

REPLY.

To

The Supdg. Engineer

The undersigned has the honour to invite attention to the correspondence noted in the margin and to request that this reminder may be returned at once with information as to—

(1) the stage at which the matter now is,

(2) the date by which ... expected ...

S.S.D. 16726 / 655 5.10.13 Trichinopoly

2. It is requested that the reply to this reminder may be sent not later than 18.12.13

3. The previous reminder of 20.11.13 has not yet been replied to.

Office P.W.D. (I)

Signature Despatched for Chief Engineer for Irrig.

Designation

Dated 6.12.13

Regulation of water supply from the Periyar lake.

Forwarding a copy of the E.E.'s letter stating that the references have been further ...

5523/15

(10)

G.F.—29.

DEPARTMENT.

PUBLIC WORKS DEPT., IRRIGATION
Madras
23 DEC 1915
No. 9998/I.A
GOVERNMENT OF MADRAS

Received .... 191 . Registered .... 191 .

Subject.

Regulation of water supply from the Periyar Lake. Communicating a copy of telegram from the Executive Engineer to say that the Collector's opinion re the — is still awaited

ENCLOSURES.
No.
Spare copies

No. 2064 CE

Station Trichinopoly, Dated the 22-12- 1915

From (Name) Rao Bahadur M.R.Ry L. D. Venkataramana Ayyar al B.A B.C.E.

(Designation) Superintending Engineer 6th Circle

To The Chief Engineer for Irrigation and Secretary to the Government of Madras,

Public Works Department.

Sir,

Copy of a telegram dated 14th December 1915, from the Executive Engineer, Madura Division, to the Superintending Engineer, VI Circle, Trichinopoly.

Your number 10807 Collector's opinion called for in number 2514 dated 6th ultimo. Three reminders issued. No reply.

No. 2064 CE
22.12.1915

Forwarded to the Chief Engineer for Irrigation for information in continuation of this office No.2023-C.E dated 14th December 1915.

Gopalachari
for Superintending Engineer, 21.12.15
VI Circle.

Sec. .—10 (a).

Public Works DEPARTMENT.
Irrigation.

Periyar Irrigation system--

Passing orders regarding the supply of water to the single crop area under the--

1580

Water & Wells.

Projects

READ AGAIN G.O. No. ...., dated .... 19 .

" " " " .... , " .... 19 .

READ ALSO:—

C. No. ...., From the S.E.6th Circle, Telegram No. ...., dated 1st July 1915.
Print { To the S.E. 6th Circle, No.313-C/15-1, dated 3-7-15
To -do- 5523/15-A-2, dated 10-9-15
From -do- 150, C.E., dated 24-1-16 19 .

" " .... " " .... , " .... , " .... 19 .

ORDER.

Press.

No. 1425 I, dated 24-3-1916.

13P

The Supg. Engineer, 6th Circle, recommended in July last a proposal of the Executive Engineer, Madura Division, that the supply of water to the single crop area under the X, XI and XII Branch channels of the Periyar system be -- commenced at any date after the 1st of July as soon as the Lake begins to surplus. It was pointed out that if the proposal was adopted there would be a great saving of water which would -- otherwise be wasted.

2. It is observed that the ryots in the single crop area at present raise a long "kalam crop" and it is believed that generally this is the only crop

148

grown. If the kalam season were to commence early in July as proposed, there is the danger that the ryots might take to raising two crops regularly, and there would then be great difficulty in supplying this area at the end of the season. The following arrangement is considered the best under the circumstances:-

1. During the period - June to August - water will be restricted to the double crop area, the extra supplies - derived from the opening of the head sluice fully when the lake surpluses being -- utilized in filling all Government tanks first and subsequently zamindari tanks. Thus, when the kalam season begins, the double crop area can be kept going with a comparatively small supply, and there will be no difficulty in meeting fully the demands of the single crop area.

PKG 9.3.16

To the Supg. Engineer, VI Circle.
,, ,, Board of Revenue, Rev. Sett.
,, ,, Revenue Department.

S.C. Copies Section 15/16.

Print Notes

Not E.T.

DESPATCHED
Date 24/3

24.3.16

43